

Claims

1. An inflator for an air bag comprising
a tubular inflator housing which is provided at axial both
sides thereof with opening portions,

diffuser portions which are mounted at axial both ends
of the inflator housing and are provided with a gas discharging
port for discharging pressurized medium flowing out from the
opening portions into an air bag,

rupturable plates which closes either of the openings of
the inflator housing or the gas discharging port to seal off
the pressurized medium inside, and

igniters which are provided to correspond to the
respective rupturable plates and rupture the rupturable plates,

wherein narrow paths for regulating respective flow
amounts of the pressurized medium are provided at axial both
sides of the inflator housing, and

a gas flow path sectional area (A) of either one of the
narrow paths and a gas flow path sectional area (B) of the other
narrow path are different from each other.

2. An inflator for an air bag according to claim 1, wherein
the narrow paths are plural gas discharging ports formed in the
respective diffuser portions, and

a total opening area of gas discharging ports formed at
one of the diffuser portions is different from a total opening
area of gas discharging ports formed at the other of the diffuser
portions.

3. An inflator for an air bag according to claim 1, wherein the narrow paths are opening portions provided at the axial both end portions of the inflator housing, and

an opening area of the opening portion formed at one of the axial end portions of the inflator housing is different from an opening area formed at the other of the axial end portions of the inflator housing.

4. An inflator for an air bag according to claim 1, wherein the diffuser portions include igniters which rupture the respective rupturable plates,

the narrow paths are clearances leading to the gas discharging port and formed between inner faces of the diffuser portions and outer peripheral surfaces of the igniters, and

the minimum diametrical sectional area of the clearance between the inner peripheral surface of one of the diffuser portions and the outer peripheral surface of a corresponding igniter is different from the minimum diametrical sectional area of the clearance between the inner peripheral surface of the other diffuser portion and the outer peripheral surface of the other igniter.

5. An inflator for an air bag according to claim 1, wherein a partition plate expanding in a diametrical direction is disposed in the interior of the inflator housing, and a hole portion formed to have a flow path sectional area of a gas which is further smaller than the narrow path having a smaller flow path sectional area of a gas of the narrow paths formed at the axial both sides of the inflator housing.

6. An inflator for an air bag according to claim 1, wherein a partition plate expanding in a diametrical direction is disposed in the interior of the inflator housing, a hole portion is provided in the partition plate, the hole portion is closed by a closing member attached from a side in which the narrow path with a larger flow path sectional area of a gas of the narrow paths formed at the axial both sides of the inflator housing is formed.

7. An inflator for an air bag according to claim 1 or 2, wherein one of the two diffuser portions mounted at the axial both ends of the inflator housing connects to an air bag or air bag portion existing in the vicinity of a upper lateral part of a passenger and the other diffuser portion connects to another air bag or another air bag portion existing in the vicinity of a lower lateral part of the passenger, and

a gas flow path sectional area (A) of the narrow path formed at the diffuser portion connecting to the air bag or the air bag portion existing in the vicinity of the upper lateral part of the passenger is formed to be smaller than a gas flow path sectional area (B) of the narrow path formed at the diffuser portion connecting to the air bag or the air bag portion existing in the vicinity of the lower lateral part of the passenger.

8. An inflator for an air bag according to claim 1, wherein one of the two diffuser portions mounted at axial both ends of the inflator housing connects to an air bag or air bag portion existing in the vicinity of a upper lateral part of a passenger and the other diffuser portion connects to another air bag or

another air bag portion existing in the vicinity of a lower lateral part of the passenger, and

a gas flow path sectional area (A) of the narrow path formed at the diffuser portion connecting to the air bag or the air bag portion existing in the vicinity of the upper lateral part of the passenger is formed larger than a gas flow path sectional area (B) of the narrow path formed at the diffuser portion connecting to the air bag or the air bag portion existing in the vicinity of the lower lateral part of the passenger.

9. An air bag system including an air bag and an inflator for an air bag for inflating an air bag,

wherein the air bag has a first gas introducing port and a second gas introducing port,

an inflator according to claim 1 is used as the inflator for an air bag, and

respective diffuser portions provided to the inflator for an air bag are each connected to different gas introducing ports.

10. An air bag system according to claim 9, wherein an inner space of the air bag is partitioned into a space connecting to the first gas introducing port and a space connecting to the second gas introducing port, and the spaces are in communication with each other at a portion.

11. An air bag system according to claim 9, wherein the first gas introducing port connects to an air bag portion existing in the vicinity of an upper lateral part of a passenger and the second gas introducing port connects to another air bag

portion existing in the vicinity of a lower lateral part of the passenger, and

a gas flow path sectional area (A) of a narrow path formed at a side of a first diffuser portion connecting to the first gas introducing port is formed smaller than a gas flow path sectional area (B) of a narrow path formed at a side of a second diffuser portion connecting to the second gas introducing port.

12. An air bag system according to claim 9, wherein the first gas introducing port connects to an air bag portion existing in the vicinity of an upper lateral part of a passenger and the second gas introducing port connects to another air bag portion existing in the vicinity of a lower lateral part of the passenger, and

a gas flow path sectional area (A) of a narrow path formed at a side of a first diffuser portion connecting to the first gas introducing port is formed larger than a gas flow path sectional area (B) of a narrow path formed at a side of a second diffuser portion connecting to the second gas introducing port.

13. An air bag system including plural air bags and an inflator for an air bag for inflating the air bags, wherein

an inflator according to claim 1 is used as the inflator for an air bag, and

different air bags of the plural air bags are mounted to respective diffuser portions provided to the inflator for an air bag.

14. An air bag system according to claim 13, wherein a gas flow path sectional area (A) of a narrow path formed at a

side of a first diffuser portion mounted with an air bag of the plural air bag which exists in the vicinity of an upper portion of a passenger is formed smaller than a gas flow path sectional area (B) of a narrow path formed at a side of a second diffuser portion mounted with an air bag of the plural air bags which exists in the vicinity of a lower portion of the passenger.

15. An air bag system according to claim 13, wherein a gas flow path sectional area (A) of a narrow path formed at a side of a first diffuser portion mounted with an air bag of the plural air bags which exists in the vicinity of an upper portion of a passenger is formed larger than a gas flow path sectional area (B) of a narrow path formed at a side of a second diffuser portion mounted with an air bag of the plural air bags which exists in the vicinity of a lower portion of the passenger.